

What is claimed is:

1. An apparatus for data transfer comprising:
  - a first network;
  - a second network; and
- 5 a plurality of nodes on said first network wherein secured data is transferred between at least two nodes of said plurality of nodes on said first network only if said at least two nodes also exist on said second network.
2. The apparatus of claim 1 wherein unsecured data is freely transferred between said at least two nodes on said first network.
- 10 3. The apparatus of claim 1 wherein unsecured data is freely transferred between said at least two nodes on said second network.
4. The apparatus of claim 1 wherein said at least two nodes exist on said second network for the entire period of said data transfer across said first network.
5. The apparatus of claim 4 further including security negotiation for use of said first network wherein said security negotiation data is transferred between said at least two nodes only over said second network.
- 15 6. The apparatus of claim 4 wherein said first network is a wireless network.
7. The apparatus of claim 4 wherein said second network is a private network.
8. The apparatus of claim 4 further including at least one interface module for communicating with data resources.
- 20 9. The apparatus of claim 5 wherein said security negotiation further includes at least one authentication key.
10. The apparatus of claim 7 wherein said private network is a wired network.
11. The apparatus of claim 9 wherein said authentication key is periodically changed.

12. The apparatus of claim 9 wherein said authentication key is randomly changed.
13. The apparatus of claim 9 wherein said authentication key is established by one of the group consisting of the manufacturer, the service provider, the end user and a predetermined algorithm.

5    14. The apparatus of claim 10 wherein said private network has predetermined physical boundaries.

15. The apparatus of claim 11 wherein said wired network is selected from the group comprising facility electrical wiring network, a home PNA telephone wiring network, a standard wired Ethernet network, and a coaxial cable network.

10    16. The apparatus of claim 14 wherein said private network further includes predetermined physical access points.

17. The apparatus of claim 14 wherein said physical access points include at least one selected from the group consisting of electrical outlets, phone jacks, and Ethernet jacks.

15    18. A method for data transfer, the method comprising the steps of:

- providing a first network;
- providing second network;
- authenticating a relationship between at least two nodes on said second network;

20                transferring data between said at least two nodes on said first network;  
                      re-authenticating a relationship between at least two nodes on said second network; and  
                      de-authenticating a relationship between at least two nodes.

19. The method of claim 18 wherein said step of determining whether at least two nodes of said plurality of nodes exist on both said first network and said second network further includes:
  - 5 requesting mutual authentication of said relationship between at least two nodes of said plurality of nodes via said first network to allow data transfer between said at least two nodes of said plurality of nodes over said second network; and
  - authenticating said at least two nodes of said plurality of nodes.
20. The method of claim 19 wherein said step of authenticating said at least two nodes of said plurality of nodes is repeated periodically on said second network throughout the duration of said data transfer.
- 10 21. The method of claim 20 wherein said step of de-authenticating said relationship between at least two nodes is conducted on said second network.
22. The a method of claim 21 wherein said first network is a wireless network and said 15 second network is a private network.
23. An apparatus for data transfer, the method comprising the steps of:
  - means for providing a first network;
  - means for providing second network;
  - means for authenticating a relationship between at least two nodes on said 20 second network;
  - means for transferring data between said at least two nodes on said first network;
  - means for re-authenticating a relationship between at least two nodes on said second network; and

means for de-authenticating a relationship between at least two nodes on said second network.

24. The apparatus of claim 23 wherein said step of determining whether at least two nodes of said plurality of nodes exist on both said first network and said second network further includes:

means for requesting mutual authentication of said relationship between at least two nodes of said plurality of nodes via said first network to allow data transfer between said at least two nodes of said plurality of nodes over said second network; and

10 means for authenticating said at least two nodes of said plurality of nodes.

25. The apparatus of claim 24 wherein said first network is a wireless network and said second network is a private network.

26. An apparatus for data transfer comprising:

at least one interface module for communicating with data resources;

15 a home wired network interface module for sending and receiving control packets and security packets;

a wireless network interface module for sending and receiving data packets;  
and

20 a processing unit for encapsulating data packets, de-encapsulating said data packets, processing said security packets, processing said control packets, detecting a second processing unit on both said home wired network and said wireless network and delivering said data packets on said wireless network interface module to said second processing unit.

27. The apparatus of claim 26 wherein said data resources are selected from the group comprising internet, cable, telephone, digital versatile disc, personal video recorder, personal computer and video camera.
28. The apparatus of claim 26 wherein said apparatus is integrated within home entertainment and computing equipment.  
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